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PROPOSED PLAN INDUSTRIAL OPERATIONS AREA FORMER NAS SOUTH WEYMOUTH
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Proposed Plan

Industrial Operations Area Former Naval Air Station South Weymouth Weymouth, Massachusetts

The Proposed Plan

This document was prepared in accordance with federal law to present the Navy's proposed cleanup approach for the Industrial Operations Area (IOA) at the former Naval Air Station (NAS) South Weymouth in Weymouth, Massachusetts. **The Navy's proposed remedy for the IOA is excavation and off-site disposal.** The Navy prepared this Proposed Plan after careful study in coordination with federal and state environmental regulatory agencies. This document provides the public with information regarding this plan and describes how to become involved in the decision-making process.

Introduction

This Proposed Plan provides information to the public on the proposed cleanup plan for the IOA Site (the Site) at the former NAS South Weymouth (the Base) located in Weymouth, Massachusetts (see Figure 1). This plan has been prepared to inform the community of the Navy's basis for the preferred cleanup approach for the Site, and encourage community participation in the decision-making process.

The Navy prepared this Proposed Plan for the Site based upon a thorough evaluation conducted in accordance with the federal Comprehensive Environmental Response, Compensation and Liability Act (CERCLA). This law, better known as Superfund, establishes procedures for investigating and cleaning up hazardous waste sites. Key terms, such as CERCLA, are defined in the Glossary of Terms at the end of this document.

The Navy (as the lead agency) works closely with the U.S. Environmental Protection Agency (EPA) and the Massachusetts Department of Environmental Protection (MassDEP) in performing environmental investigations, remedial actions, and related activities at the Base to return the property to the local communities for reuse and development.

Let us know what you think!

Mark Your Calendar!

PUBLIC COMMENT PERIOD June 22, 2015 to July 22, 2015

The Navy will accept written comments on this Proposed Plan during this period. Send written comments postmarked no later than July 22, 2015 to:



Mr. Brian Helland
Remedial Project Manager
BRAC Program Management Office, East
4911 South Broad Street
Philadelphia, PA 19112

or email your comments to: brian.helland@navy.mil

PUBLIC MEETING AND PUBLIC HEARING – July 7, 2015

The Navy will hold a public meeting at 7:00 p.m. that will include posters and a Navy presentation describing the Proposed Plan. Following the presentation, Navy will host a question and answer session. The Navy will then hold a formal public hearing from 8:00 p.m. until all comments are heard. At the formal hearing an official transcript of comments will be entered into the record. The above activities will be held at the Southfield Town Hall, Shea Memorial Drive, South Weymouth, Massachusetts.

For more information, visit one of the Information Repositories listed at the end of this Proposed Plan.

The Navy prepared this Proposed Plan in accordance with CERCLA Section 117(a) and Section 300.430(f)(2) of the National Contingency Plan (NCP). This plan and the associated community involvement activities fulfill the Navy's public participation responsibilities under these laws.

The purpose of this document is to:

- Provide information about environmental investigations completed at the Site;
- Identify and explain the Navy's preferred cleanup plan for the Site;
- Describe the other cleanup options that were considered;
- Encourage public review of and comments on all alternatives described; and
- Provide information on how the public can be involved in the decision-making process.

Once the public has had the opportunity to review and comment on this Proposed Plan, the Navy will summarize and respond to all comments received during the comment period and public hearing in a document called the Responsiveness Summary. The Navy, with input from EPA and MassDEP, will carefully consider all comments received; based on the comments, the Navy could modify the cleanup plan or even select a different plan from that proposed. Ultimately, the selected cleanup plan for the Site will be documented in the Record of Decision (ROD). The Responsiveness Summary will be issued with the ROD.

This Proposed Plan summarizes key information from previous reports concerning the Site. More detailed information can be found in the reports referenced in this Plan. The reports are available for public review at the Information Repositories for the Base (locations listed at the end of this document).

The Navy encourages the public to review the referenced reports to gain a better understanding of the environmental activities completed for the Site.

The CERCLA Process and the Industrial Operations Area

The IOA is one of many environmental sites located at the former NAS South Weymouth (Figure 1). The Navy followed the CERCLA process in investigating the IOA Site. Each step in the CERCLA process was completed by the Navy with input, review, and approval from the EPA and input, review, and comment from MassDEP.

The Navy has investigated 17 environmental sites within the IOA site under various environmental programs, including seven review item areas (RIAs) identified under the Environmental Baseline Survey (EBS) program, four areas of concern

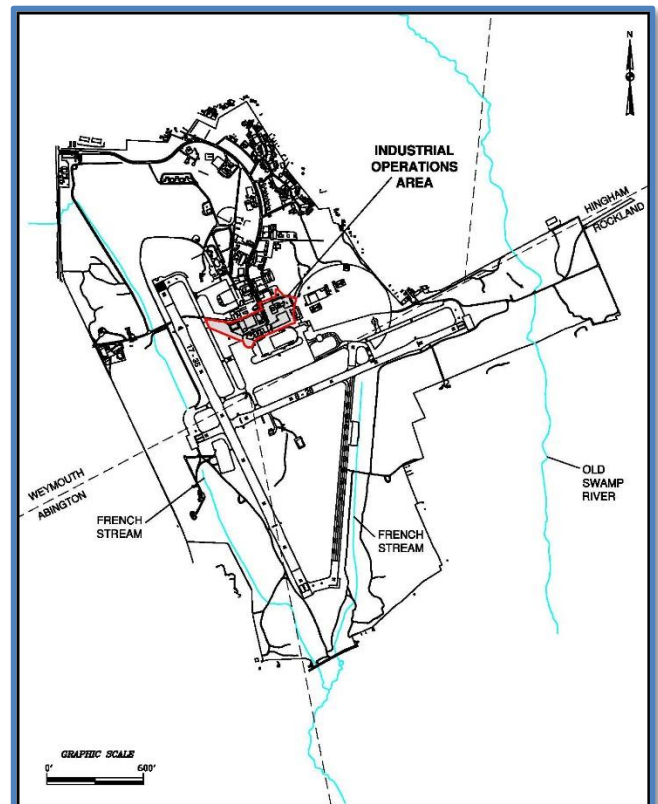


Figure 1 – IOA Site Location within former NAS South Weymouth

(AOCs) investigated under CERCLA, and four petroleum sites investigated under the Massachusetts Contingency Plan (MCP) (Figure 2).

The focus of these previous investigations was to investigate known or suspected contaminant sources. The previous investigations led to closure of 12 sites, with 4 remaining active: RIA 33 (aircraft intermediate maintenance division [AIMD] Building Shop), RIA 82 (Power House), AOC 14 (Water Tower), and AOC 83 (Hazardous Waste Storage Area). Table 1 includes a list of the 16 environmental sites within the IOA, and summarizes the removal actions conducted and the status of each site.

The IOA encompasses the central industrial portion of the former Base and includes RIAs 33 and 82, as well as AOCs 14 and 83. Due to EPA and MassDEP concern about the presence of potential low-level dispersed contamination likely due to general industrial operations in the IOA, the Navy completed an evaluation of existing soil and groundwater data collected from the 16 environmental sites within the IOA. The dataset was compiled and presented in the May 2010 *IOA Technical Memorandum, Former NAS South Weymouth, Weymouth, MA* (IOA Technical Memorandum). The information was used to identify data gaps and assist in scoping a Sampling and Analysis Plan (SAP) for additional sampling activities at the IOA.

In August 2011, the *IOA Site Investigation SAP, Former NAS South Weymouth, Weymouth, MA* (IOA Site Investigation SAP) which described the number of samples, locations, media, and analytical parameters, was developed in collaboration with the EPA and MassDEP. The IOA investigation was conducted in 2011 to 1) address potential low-level dispersed contamination due to general industrial operations in the IOA, but not necessarily attributable to a specific source, and 2) to conduct additional subsurface soil confirmation sampling at two RIAs (RIA 33 and RIA 82) where removal actions had been previously performed (Table 1 and Figure 2).

As part of the CERCLA process, samples were collected and analyzed for potential contaminants of concern. The results of the 2011 IOA investigation were compiled with historical results to generate a complete IOA dataset. The results were screened against human health risk-based benchmarks and background values for the Base. The results of the 2011 investigation and IOA data evaluation were reported in the April 2013 *IOA Project Report, Former NAS South Weymouth, Weymouth, MA* (IOA Project Report).

Based on a review of site investigation results, and discussions with EPA and MassDEP, the Navy elected to perform a streamlined Human Health Risk Assessment (HHRA) to further characterize the potential threat to human health from exposure to site soils. The streamlined HHRA identified potential risks associated with concentrations of polycyclic aromatic hydrocarbons (PAHs), polychlorinated biphenyls (PCBs), and metals (arsenic and chromium). The *Focused Feasibility Study (FFS) Report IOA, Former NAS South Weymouth, Weymouth, MA* (IOA FFS) was prepared in April 2015 to evaluate potential cleanup alternatives.

Information about the Site is provided below. Documents referenced in this Proposed Plan are available at the Information Repositories listed at the end of this document.

Site Background and Characteristics

Where is the Site?

The Site is located in the central portion of the Base and covers approximately 20 acres (Figure 3). It is east of the former north-south runway and north of the former east-west runway. The area is occupied by 13 inactive buildings, including the former power plant (Building 8), the former AIMD facility (Building 117), and supply warehouse (Building 2) and is the location of remnants of a railroad spur, a former water tower, and a former waste storage area.

Environmental Investigations

1994: EPA listed the former NAS South Weymouth on the National Priorities List.

1998-2011: The Navy investigated 17 separate environmental sites located within the IOA under the various environmental programs, as EBS RIAs, AOCs under CERCLA, and as petroleum sites under the MCP. The investigations led to closure of 12 sites, with 4 remaining active: RIA 33 (AIMD Building Shop), RIA 82 (Power House), AOC 14 (Water Tower), and AOC 83 (Hazardous Waste Storage Area) (Table 1). Previous removal actions completed at these sites are illustrated on Figure 2.

2010: Due to EPA and MassDEP concern about the presence of potential low-level dispersed contamination likely due to general industrial operations in the IOA, the Navy completed an evaluation of existing soil and groundwater data for all 16 environmental sites within the IOA. The data were compiled and presented in the May 2010 IOA Technical Memorandum. The information was used to identify data gaps and assist in scoping a SAP for additional sampling activities at the IOA.

2011: The Navy conducted the IOA investigation per the August 2011 IOA Site Investigation SAP.

2013: The Navy presented the results of the 2011 investigation and historical data evaluation in the April 2013 IOA Project Report. A streamlined HHRA was performed to further characterize potential threats to human health from exposure to Site soils; the HHRA was included in the 2013 IOA Project Report.

2015: The Navy completed an FFS in April 2015 to develop and evaluate remedial alternatives designed to mitigate potential risks to human health from impacted soil due to past Navy activities at the Site.



Figure 3 – IOA Site – Current Features

What was the Site used for?

The Site was used for various industrial operations, including coal storage, operation of the power plant, and movement of materials by truck and rail (Figure

4). Impacts to soil may have been a result of these operations, airborne discharges associated with the power plant, and general spills.



Figure 4 – IOA Site in 1969

What does the Site look like today?

The Site is generally flat and mostly covered by asphalt or vacant buildings. There are a few small grassy areas around the buildings and sidewalks. Figure 5 below shows a portion of the Site located east of Shea Memorial Drive as it is at present.



Figure 5 – Eastern Portion of IOA, Looking East Toward Building 2 and the Former Waste Storage Area

What were the investigation results?

In 2010, existing soil and groundwater data for the 16 environmental sites within the IOA conducted under various regulatory authorities were compiled and evaluated; the results of this evaluation were presented in the May 2010 IOA Technical Memorandum. This evaluation of existing data was used to identify data gaps and to support decisions regarding additional sampling at the IOA.

It was determined at that time that IOA groundwater conditions were adequately documented with existing data and based on that data, groundwater was not a medium of concern at the Site. Sediment and surface water were not included as media of concern because the IOA does not contain any surface water bodies.

Analysis of historical data also showed that subsurface soils contained low levels of contaminants and concentrations that generally decreased with depth. Therefore, subsurface soil was not a medium of concern site-wide. It was recommended that the additional IOA investigation focus on surface soil throughout the IOA and on subsurface soil at targeted locations only: in the vicinity of RIA 33 and RIA 82, where residual subsurface contamination was suspected to be present after previous removal actions.

For this additional investigation, the IOA was divided into 49 exposure units (EUs) (See Figure 6 for EU locations). The EUs were established on a roughly ½ - acre grid. Sampling was performed to ensure that surface soil in each EU was represented adequately.

In 2011, the Navy conducted the additional field investigation, in accordance with the August 2011 IOA Site Investigation SAP, to assess the low-level, dispersed contamination potentially present due to industrial operations in the IOA and suspected subsurface soil contamination remaining at RIA 33 and RIA 82.

2011 Investigation Results and Data Evaluation

The results of the 2011 IOA investigation were compiled with historical results, from the 16 environmental sites within the IOA, to complete the IOA data set. An evaluation of the complete IOA data set was completed and presented in the April 2013 IOA Project Report. The results are summarized below:

Surface Soil:

- **Extractable Petroleum Hydrocarbons (EPH) and Volatile Petroleum Hydrocarbons (VPH)** –EPH/VPH analysis was not performed during the 2011 IOA investigation because historical sample results did not exceed screening criteria.
- **PAHs** –Twenty three PAHs were detected in site surface soil. Concentrations of six of those PAHs exceeded screening criteria. The six PAHs exceeding screening criteria were, benzo(a)anthracene, benzo(a)pyrene,

benzo(b)fluoranthene, benzo(k)fluoranthene, dibenzo(a,h)anthracene, and indeno(1,2,3-cd)pyrene. The highest concentrations of those compounds were from two historical samples located in EU28. The remaining PAH exceedances were primarily associated with EUs in the vicinity of EU28, including EU29 and EU37 through EU40.

- **Pesticides** – Fourteen pesticides were detected in historical surface soil samples. However, only one pesticide (heptachlor epoxide) found at two locations in EU28 had concentrations exceeding screening criteria.
- **PCBs** – Aroclor-1260 was the only PCB detected in surface soil. Concentrations of Aroclor-1260 exceeded screening criteria in 18 of 66 samples. The majority of these exceedances were detected in samples collected in the eastern portion of the Site, north and east of EU15.
- **Dioxins** – One dioxin, 2,3,4,7,8-pentachlorodibenzofuran (PECDF), exceeded screening criteria in one sample located in the northern portion of the Site.
- **Inorganics** – Concentrations of eight metals (aluminum, arsenic, chromium, cobalt, iron, manganese, thallium, and vanadium) exceeded screening criteria. The maximum concentrations of chromium, arsenic, and iron are located in the south central portion of the Site. The remaining maximum concentrations are located in the northeastern and eastern portion of the Site.

Subsurface Soil:

Subsurface soil samples were collected in the vicinity of RIA 33 and RIA 82 to determine whether contaminants remained after removal actions at these two RIAs had been completed.

RIA 33:

Five subsurface soil samples were collected in the vicinity of RIA 33 and analyzed for volatile organic compounds (VOCs), PAHs, and metals.

- **VOCs** – Three VOCs were detected in subsurface soil samples from RIA 33, but their concentrations did not exceed the screening criteria.
- **PAHs** – Concentrations of five PAHs [benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, dibenzo(a,h)anthracene, and indeno(1,2,3-cd)pyrene] exceeded screening criteria at

one or more sample locations. The majority of the PAH exceedances were associated with one sample location (SB08).

- **Inorganics** – Concentrations of seven metals (aluminum, arsenic, chromium, cobalt, iron, manganese, and thallium) exceeded associated screening criteria at one or more locations at RIA 33.

RIA 82:

Four subsurface soil samples were collected in the vicinity of RIA 82 and analyzed for PAHs and metals.

- **PAHs** – There were no PAH detections in the subsurface soil samples collected from RIA 82.
- **Inorganics** – Concentrations of four metals (arsenic, chromium, cobalt, and iron) exceeded screening criteria at one or more subsurface soil samples collected from RIA 82.

Summary of Site Risks

The sample results evaluated in the IOA Project Report were used in the HHRA to determine if site concentrations posed a threat to human health and/or the environment.

Human Health Risks

The Navy conducted a streamlined HHRA to determine whether detected concentrations of chemicals at the IOA Site pose an unacceptable risk to human health and the environment.

A four-step process was used to estimate the baseline risk for human health.

Step 1 - Hazard Identification. Chemicals of potential concern (COPCs) were identified as those analytes with concentrations that exceeded risk-based screening levels (EPA Regional Screening Levels [RSLs] and background levels, if applicable). COPCs were used for site-specific risk calculations (i.e., Steps 2 through 4 described below).

Step 2 - Exposure Assessment. This process examines possible pathways by which humans may contact the COPCs based on current and future use scenarios. The HHRA was streamlined in the sense that it focused on two receptors of concern, the hypothetical future resident and the hypothetical future commercial receptor (both including adult, child, and lifetime risk). A future residential scenario is considered to be protective of all potential future receptors at the Site. Potential exposure pathways included: touching or incidental ingestion of soil inhalation of fugitive dust and volatile emissions from soil.

The future uses of the former NAS South Weymouth property have been established in the Zoning and Land Use By-Laws and the Reuse Plan approved in 2005 and amended in 2007. The IOA area is currently zoned for a recreation district (RecD), Mixed-Use Village District (MUVd), the Village Center District (VCD), and the Main Street Overlay District as designated in the Reuse Plan. Zoning within the IOA allows for a broad range of uses including one or more of the following: recreational, institutional, commercial, office, retail, residential, and open space.

Step 3 - Toxicity Assessment. The possible harmful effects to humans from the COPCs were evaluated. These chemicals were separated into two groups: carcinogens (COPCs that may cause cancer) and non-carcinogens (COPCs that may cause adverse health effects other than cancer).

Step 4 - Characterization of the Risk. Lastly, the results from the exposure and toxicity assessments were combined to calculate the overall risks from exposure to site COPCs. The text box "How Are the Risks Expressed?" on page 6 describes how risk calculations are expressed.

Conclusions – For future residents (child and lifelong), exposure to surface soil from direct contact and incidental ingestion is the only pathway with hazard indices exceeding 1 and cancer risks exceeding the EPA cancer risk range. The major contributors to cancer risk for the hypothetical future resident exposed to site surface soil include the following contaminants of concern (COCs): benzo(a)pyrene equivalents, benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, dibenzo(a,h)anthracene, indeno(1,2,3-cd)pyrene, Aroclor-1260 (PCB), heptachlor epoxide (pesticide), 2,3,7,8-TCDD Equivalents (dioxin), arsenic, and chromium.

Risks to human health from exposure to subsurface soil at RIA 33 and RIA 82 did not exceed the EPA target risk range.

Ecological Risks

An ecological risk assessment was not conducted for the Site because the Site is highly industrialized. Most of the Site is covered by pavement, buildings, or former building slabs. The ecological habitat in the immediate vicinity of the Site is limited by the extensive pavement and urbanization. Because the Site lacks any significant potential ecological habitat, there is no complete exposure pathway for ecological receptors.

How Are the Risks Expressed?

It depends on the type of chemical. For potential carcinogens, the risk to human health is expressed in terms of the probability of the chemical causing cancer over an estimated lifetime of 70 years. EPA's acceptable risk range for carcinogens is from 1 in 1 million to 1 in 10,000. In general, calculated risks that are greater than 1 in 10,000 would require consideration of cleanup alternatives. For non-carcinogens, the risk to human health is expressed as a Hazard Index. A Hazard Index greater than 1 suggests that adverse health effects are possible.

Risks from lead exposure are evaluated using a different methodology. Estimations of blood-lead concentrations are used to evaluate potential adverse health effects. Infants and young children are extremely susceptible to adverse effects from exposure to lead. Blood-lead levels (either fetal or young child) greater than 10 micrograms per liter (µg/dL) are considered to be a "concern." EPA's stated goal for lead is that individuals exposed would have no more than a 5 percent probability of exceeding the level of concern of 10 µg/dL.

Remedial Action Objectives

Remedial Action Objectives (RAOs) are the goals that a cleanup plan must achieve. They are established to protect human health and the environment, and to comply with all relevant federal and state regulations. Based on the HHRA, an FFS was required to evaluate possible actions to address the identified human health risks in surface soils. The following RAO was identified for the IOA Site:

- Prevent exposure (i.e. direct contact or ingestion) to COCs in soils exceeding risk-based cleanup goals.

Preliminary Remediation Goals

Site-specific Preliminary Remediation Goals (PRGs) were developed for the IOA Site and are identified in the FFS. The PRGs selected for site surface soil are presented in Table 2.

A comparison of surface soil concentrations in EUs where risks were identified to the PRGs was completed. Nine EUs with COCs warranting remedial action were identified and are illustrated on Figure 6.

Summary of Remedial Alternatives

Remedial alternatives, or cleanup options, were identified for the Site in the FFS. Three alternatives were selected to meet the RAO noted above.

Each alternative is described below.

Alternative S-1: No Action

A “no action” alternative is one where no cleanup remedies or land use controls (LUCs) would be applied. This is required under CERCLA and the NCP and serves as a baseline for comparison with other alternatives.

Alternative S-2: Excavation and Off-Site Disposal

This alternative consists of excavation and off-site disposal of soil with COC concentrations exceeding the PRGs. Pre-excavation soil sampling would be conducted to further define the areas to be excavated. Soil exceeding the PRGs would be excavated and transported off-site for disposal. Post-excavation confirmatory soil sampling would be conducted to confirm the RAO has been achieved. Once confirmatory soil sampling determined the RAO was achieved, the Site would be restored by backfilling the excavated areas with clean fill and covering the areas with stable fill material.

Alternative S-2 would be protective of human health and the environment by removing surface soil with COCs exceeding the PRGs and, thus, eliminating risk to residential receptors who may be in contact with site surface soils. Alternative S-2 would reduce the toxicity, mobility, and volume of COCs at levels exceeding PRGs in surface soil through excavation and off-site disposal and provide long-term effectiveness and permanence. Excavation, combined with subsequent off-site disposal, would be a permanent solution and would immediately attain the RAO for the protection of human health and the environment.

Alternative S-2 is readily implementable for soil at the Site and has been successfully completed at other areas at former NAS South Weymouth.

Alternative S-3: Asphalt Capping and LUCs

This alternative consists of installing an asphalt cap, implementing LUCs, and conducting five-year reviews to ensure the cap remained protective. Use of a cover, or cap, simply involves installing the selected material as a barrier over the impacted soil to prevent direct contact with surface soil with COC concentrations exceeding PRGs. This containment

technology uses modified paving construction techniques to meet the stated goals.

Pre-cap soil sampling, to better define the areas warranting installation of an asphalt cap, would be identical to the pre-excavation sampling proposed under Alternative S-2.

Under Alternative S-3, elevated COC concentrations would remain in the soil beneath the asphalt cap. LUCs or a deed restriction would be required in conjunction with capping to prevent residential and recreation future use of the capped areas and to maintain the integrity of the cap. Annual inspections of the LUCs and evaluation of the cap integrity would be required. The cap would need to be maintained with sealant and/or patched periodically and eventually replaced after its expected life to prevent exposure to the underlying soil. LUCs may be augmented by monitoring (inspection) and signage, depending on the use of the property during and following site reuse and development.

Since contamination would remain in place in excess of levels that allow for unrestricted site use and unlimited exposure, five-year reviews would be required under Alternative S-3 to evaluate the continued adequacy of the remedy and to ensure the Site LUCs continue to be met.

Capping the source of contamination would significantly reduce the potential risks to human health and the environment by providing a barrier between COCs in soil and potential receptors. It is recognized however, that this barrier would need to remain in place during future development. LUCs would ensure protection of human health and the environment by restricting future use of the capped area or actions that may damage the cap. The long-term effectiveness and permanence of Alternative S-3 would depend on long-term maintenance of the asphalt cap, as well as, monitoring and enforcement of the LUCs.

Alternative S-3 is readily implementable for soil at the Site.

Evaluation of Alternatives

EPA has established nine criteria for use in comparing the advantages/disadvantages of each remedial alternative. These criteria fall into three groups: threshold criteria that any selected alternative must meet; primary balancing criteria that are used to differentiate between alternatives; and modifying criteria that may be used to modify the recommended remedy. In the FFS, each remedial alternative is individually evaluated with respect to seven of the nine criteria and then compared against each other with respect to each criterion. The two modifying

criteria are evaluated after receipt of state and public comments on the Proposed Plan. Table 3 identifies the evaluation criteria and presents a summary of the evaluation of alternatives for the Site.

Preferred Alternative

In summary, the Navy is proposing Alternative S-2, Excavation and Off-Site Disposal. The Navy has concluded that this remedy protects human health and the environment and achieves the overall goals established for the Site. The Navy proposes that this remedy be the final remedy for the IOA Site.

Overall, this alternative will include the following elements:

- Pre-excavation soil sampling to better define areas to be excavated.
- Site clearing (i.e. removal of asphalt/pavement from areas to be excavated).
- Excavation of soil with COCs exceeding PRGs.
- Post-excavation confirmatory sampling to confirm the RAO has been achieved.
- Off-site disposal and transport of contaminated soils to a licensed facility.
- Site restoration.

Next Steps

Community review of and comment on this Proposed Plan is the next step in the CERCLA process for the IOA. The Navy encourages the public to review this plan and to submit comments. The Navy will accept written comments on the Proposed Plan during the public comment period, from June 22, 2015 to July 22, 2015. The Navy will accept oral comments during a Public Hearing that will follow a Public Meeting to be held on July 7, 2015 at the Southfield Town Hall, Shea Memorial Drive in South Weymouth, Massachusetts.

Once the communities have commented on this Proposed Plan, the Navy and the EPA will consider all comments received. The Navy's preferred cleanup plan could change based on community

comments. The Navy will provide written responses to formal comments received on the Proposed Plan. These responses will be provided in a document called the Responsiveness Summary that will be part of the ROD for the Site.

The ROD will contain the rationale for the Navy's and EPA's decision for the Site. The Navy and the EPA anticipate that all comments will be reviewed and the ROD will be signed by September 2015. The document will then be made available to the public at the Information Repositories listed at the end of this document. Also, the Navy will announce the availability of the ROD through the local news media and the community mailing list.

Commitment to the Communities

The Navy is committed to informing the communities about the environmental cleanup programs at the former NAS South Weymouth. A Restoration Advisory Board (RAB), composed of the community leaders, government agency representatives, and local citizens, meets regularly to discuss the environmental cleanup program at the former NAS South Weymouth. At these meetings, you can learn about and offer suggestions for the Navy's program activities. RAB meetings are held quarterly on the second Thursday of the month. Upcoming RAB meetings are publicized in local news media and are open to the public. Past meeting minutes are available on the former NAS South Weymouth website: <http://www.bracpmo.navy.mil>.

The Navy also maintains a community mailing list for distributing information about the environmental cleanup program. If you would like to be added to the mailing list, please contact Mr. Brian Helland at the address or email provided on the first page of this document. Details of the information summarized in this Proposed Plan are available for review at the information repositories listed at the end of this document.

Important Dates

Public Comment Period
June 22, 2015 to July 22, 2015

Public Meeting and Public Hearing
July 7, 2015

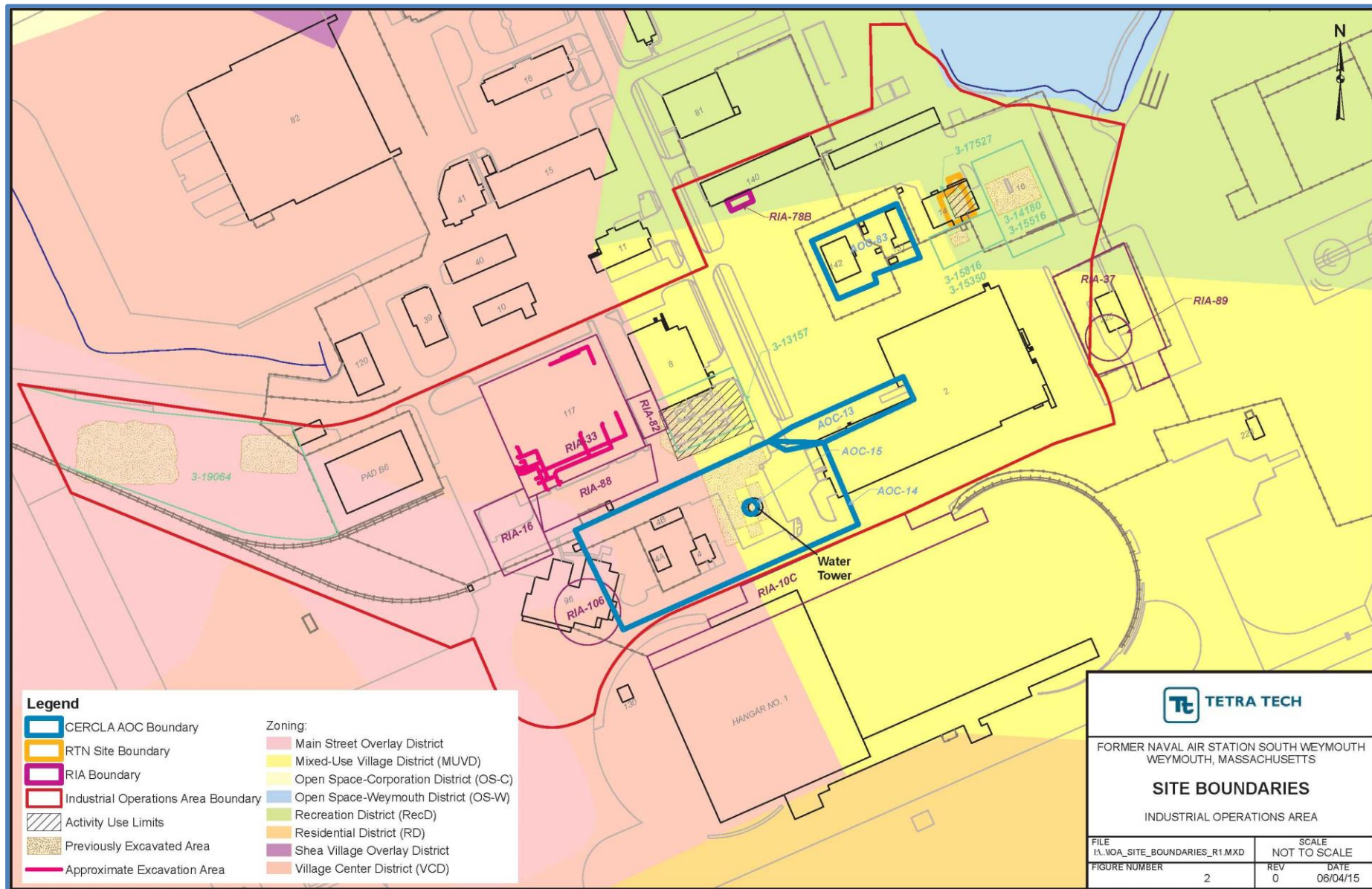


Figure 2 – Site Boundaries

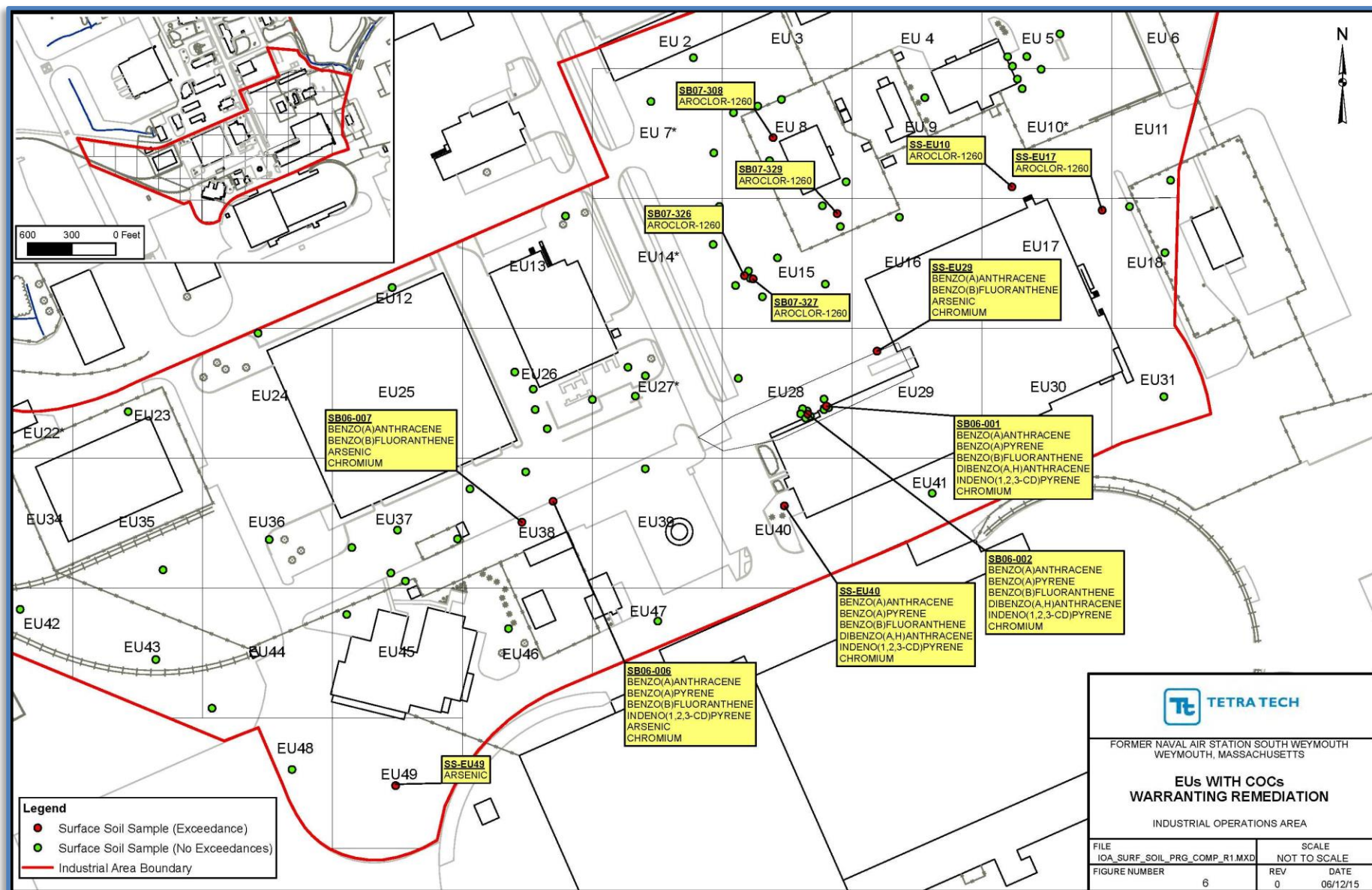


Figure 6 – EUs With COCs Warranting Remediation

Notes:

- 1) Yellow highlighted tags represent COCs in surface soil exceeding the PRGs in EUs with identified risks.
- 2) EU size is based on a half-acre grid.

TABLE 1

SITES LOCATED WITHIN THE INDUSTRIAL OPERATIONS AREA

Site Name	Program/Site ID	Removal Actions	Site Status
Building 2 (Supply Warehouse Railroad Spur)	AOC 13	Two removal actions conducted (2001 and 2004), total of 45 tons of PAH and hydrocarbon contaminated soil removed	ROD 2006
Drum Storage Area (Supply Warehouse Drum Storage)	AOC 14	N/A	Active
Water Tower – Lead Chips	AOC15	Two removal actions conducted (1999 and 2002), total of 380 tons of lead contaminated soil removed	ROD 2006
Hazardous Waste Storage Area	AOC 83	N/A	Active
Sewage Lift Station (Equalization Tank)	RIA 16	N/A	Closed 2003, NFADD
AIMD Building Shops (Building 117)	RIA 33	Removal action conducted at location of drain lines (2000-2001 timeframe)	Active
Courier Station (Drum Storage Area)	RIA 37	N/A	Closed 2003, NFADD
UST 44 (Building 140)	RIA 78B	N/A	Closed 2003, NFADD
Power House (Storage of coal and coal ash)	RIA 82	Removal action conducted to the immediate east of RIA 82 (2000) (see Building 8 - MCP Site 3-13157)	Active
AIMD Building (Alleged waste oil disposal)	RIA 88	N/A	Closed 2004, NFADD
Courier Station (Septic System)	RIA 89	N/A	Closed 2002, NFADD
Fire House (Building 96)	RIA 106	N/A	Closed 2004, NFADD
Aviation Gas USTs (3 former AvGas USTs)	MCP Site 3-19064	Removal action of three USTs and petroleum-related contaminated soils conducted (2001), approximately 3694 tons of material removed	Closed 2001, RAO (Class A2)
Building 8 (Steam Plant)	MCP Site 3-13157	Removal action of seven USTs and petroleum-related contaminated soils conducted (2000), approximately 810 tons of material removed	Closed 2000 with AUL, RAO (Class A2)
Building 14 (Fuel oil UST)	MCP Site 3-10316 & 3-15350	Removal action of one UST and petroleum-related contaminated soils conducted (1997), approximately 27 tons of material removed	Closed 1998, RAO (Class A2)
Building 14 (Oil-Water Separator)	MCP Site 3-17527	Removal action of OWS, piping, floor drains, and petroleum-related contaminated soils conducted (1998), approximately 95 tons of material removed	Closed 2000 with AUL, RAO (Class A3)
Building 116 (Gas station)	MCP Site 3-14180 & 3-15516	Removal of one UST and petroleum-related contaminated soils conducted (1997), approximately 135 tons of material removed	Closed 1998, RAO (Class B1 & A1)

Notes:

AOC: Area Of Concern

RIA: Review Item Area

MCP: Massachusetts Contingency Plan

OWS: Oil Water Separator

UST: Underground Storage Tank

AUL: Activity Use Limitation

ROD: Record of Decision

PAH: Polycyclic Aromatic Hydrocarbon

NFADD - No Further Action Decision Document

RAO - Response Action Outcome

TABLE 2
SUMMARY OF SURFACE SOIL COCs AND PRGs

Contaminant of Concern	Units	Hypothetical Risk-Based PRG ¹	Background Value	Selected PRG/Proposed Cleanup Goal	Basis for Selection
Benzo(a)pyrene Equivalents	µg/kg	150	2130	2130	Background
Benzo(a)anthracene	µg/kg	1500	810	1500	Resident Risk
Benzo(a)pyrene	µg/kg	150	1828.8	1828.8	Background
Benzo(b)fluoranthene	µg/kg	1500	770	1500	Resident Risk
Benzo(k)fluoranthene	µg/kg	15000	2700	15000	Resident Risk
Dibenzo(a,h)anthracene	µg/kg	150	96	150	Resident Risk
Indeno(1,2,3-cd)pyrene	µg/kg	1500	175	1500	Resident Risk
Aroclor-1260	µg/kg	1100*	NA	1100	Resident Risk
Heptachlor Epoxide	µg/kg	590	NA	590	Resident Risk
2,3,7,8-TCDD Equivalents	µg/kg	0.049	NA	0.049	Resident Risk
Arsenic	mg/kg	6.7	5.31	6.7	Resident Risk
Chromium	mg/kg	3.1	10.1	10.1	Background
Lead	mg/kg	400	301.7	400	Resident Risk

Notes:

*Calculated using the non-cancer toxicity criteria for Aroclor-1254.

1) PRG is based on residential exposures and is the lower of HQ=1 or cancer risk =1E-05. PRG calculations are provided in Appendix B of the FFS.

TABLE 3
COMPARISON OF REMEDIAL ALTERNATIVES

Alternative No.	S-1	S-2	S-3
Estimated Timeframes (years)			
Design and Construction of Alternative	NA	1	1
Criteria Analysis			
Threshold Criteria			
Protects human health and the environment <ul style="list-style-type: none">Will it protect you and animal life on and near the site?	⊖	●	○
Meets federal and state regulations <ul style="list-style-type: none">Does the alternative meet federal and state environmental statutes, regulations, and requirements?	⊖	●	●
Primary Balancing Criteria			
Provides long-term effectiveness and is permanent <ul style="list-style-type: none">Will the effects of the cleanup last?	⊖	●	○
Reduces mobility, toxicity, and volume of contaminants through treatment <ul style="list-style-type: none">Are the harmful effects of contaminants, their ability to spread, and the amount of contaminated material present reduced?	⊖	●	○
Provides short-term protection <ul style="list-style-type: none">How soon will the risks be reduced?Are there hazards to workers, residents, or the environment that could occur during cleanup?	⊖	○	●
Can be implemented <ul style="list-style-type: none">Is the alternative technically feasible?Are the goods and services necessary to implement the alternative readily available?	●	●	○
Cost <ul style="list-style-type: none">Up-front costs to design and construct the alternative (capital costs)Operating and maintain any system associated with the alternative (O & M costs)Total cost in today's dollars (net present worth cost)	\$0 nominal nominal	\$1.4M \$0 \$1.4M	\$580K \$0 \$755K
Modifying Criteria			
State Acceptance	To be determined after the public comment period		
Community Acceptance			
● = Good ○ = Average ⊖ = Poor K = Thousand M = Million			

GLOSSARY OF TERMS

Analyte: A substance or chemical constituent that is determined in an analytical procedure.

Area of Concern (AOC): Former Environmental Baseline Survey Review Item Area currently being investigated under CERCLA. These sites require removal actions and/or risk assessments to address site concerns.

Background Level: Chemicals or concentrations of chemicals present in the environment due to naturally occurring geochemical processes and sources, or to human activities not related to specific point sources or source releases.

Benchmark: Concentration of a chemical considered to be protective of human health or the environment.

Chemicals of Concern (COCs): Chemicals of concern are chemicals identified in the risk assessments as the primary drivers of unacceptable risks.

Chemicals of Potential Concern (COPCs): Chemicals of potential concern are chemicals found at a site at concentrations above federal and state risk-screening levels and therefore are included in the risk assessment evaluations.

Comprehensive Environmental Response, Compensation, and Liability Act

(CERCLA): A federal law passed in 1980 and amended in 1986 by the Superfund Amendments and Reauthorization Act (SARA). These laws created a system and funding mechanism for investigating and cleaning up abandoned and/or uncontrolled hazardous waste sites. The Navy's cleanup of sites regulated by CERCLA/SARA is funded by the Department of Defense under the Defense Environmental Restoration Fund.

Environmental Baseline Survey: An environmental assessment conducted by the Navy at bases that have been closed under the Base Realignment and Closure (BRAC) Act.

Feasibility Study (FS): A description and engineering study of the potential cleanup alternatives for a site.

Groundwater: Water found beneath the earth's surface that fills pores and cracks between such materials as sand, soil, gravel, or rock.

Land Use Control (LUC): Any legal or administrative restriction that prevents access or certain uses of a property.

Proposed Plan: A document that summarizes the Navy's preferred cleanup remedy for a site and provides the public with information on how they can participate in the remedy selection process.

Record of Decision (ROD): A legal, technical and public document that explains the rationale and final cleanup decision for a site. It contains a summary of the public's involvement in the cleanup decision.

Remedial Action Objective (RAO): A final cleanup objective that must be met by the selected remedial alternative.

Responsiveness Summary: A document containing the responses to the formal comments submitted by the public regarding the Proposed Plan. This summary is issued as a section of the ROD.

Your Questions and Comments Are Important



Formal comments are used to improve the decision-making process. The Navy will accept written comments from the public during the 30-day comment period and will hold a public meeting and hearing to receive oral comments (see page 1 regarding how to submit formal comments to the Navy).

Your formal comments during this time will become part of the official record for the IOA Site. The Navy will consider the comments received during the comment period before making the final decision for the Site. The public is encouraged to participate during this period. You do not have to be a technical expert to take part in the process.

For More Information...

Contacts

If you have questions or comments about this Proposed Plan, or any other questions about the IOA, please contact us:

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Information Repositories

Documents relating to environmental cleanup activities for the former NAS South Weymouth property are available for public review at the following information repositories:

Tufts Library
46 Broad Street
Weymouth, MA 02188
(781) 337-1402
Monday-Thursday: 9:00 – 9:00
Friday, Saturday: 9:00 – 5:00
Sunday: Closed

Abington Public Library
600 Gliniewicz Way
Abington, MA 02351
(781) 982-2139
Monday, Wednesday: 10:00 – 5:00
Tuesday, Thursday: 10:00 – 8:30
Saturday: 10:00 – 3:30
Friday, Sunday: Closed

Department of the Navy
Caretaker Site Office
c/o David Barney
1134 Main Street, Building 11
South Weymouth, MA 02190
Monday-Friday: 10:00 – 4:00

Hingham Public Library
66 Leavitt Street
Hingham, MA 02043
(781) 741-1406
Monday-Thursday: 10:00 – 9:00
Friday: Closed
Saturday: 9:00 – 5:00
Sunday: 1:00 – 5:00

Rockland Memorial Library
20 Belmont Street
Rockland, MA 02370
(781) 878-1236
Monday: 10:00 – 5:00
Tuesday, Wednesday: 10:00 – 8:00
Thursday-Friday: 10:00 – 5:00
Saturday-Sunday: Closed

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COMMENT SHEET – Proposed Plan for the Industrial Operations Area

Use this space to write your comments or to be added to the mailing list

The Navy encourages your written comments on the Proposed Plan for the Industrial Operations Area, Former Naval Air Station South Weymouth, Weymouth, Massachusetts. You can use the form below to send written comments. If you have questions about how to comment, please contact Brian Helland at (215) 897-4912 or via email at brian.helland@navy.mil.

This form is provided for your convenience. Please mail this form or additional sheets of written comments, postmarked no later than July 22, 2015, to the address shown below:

Mr. Brian Helland
Remedial Project Manager
BRAC Program Management Office, East
4911 South Broad Street
Philadelphia, PA 19112

This image shows a single sheet of white paper with horizontal ruling lines. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.

Comment Submitted by:

Address:

Affix
Postage

Mr. Brian Helland
Remedial Project Manager
BRAC Program Management Office, East
4911 South Broad Street
Philadelphia, PA 19112

(Fold on dotted line, staple, stamp, and mail)